

Claims:

1. A wire feeding mechanism for advancing a continuous length of wire along a pathway, comprising:

a housing having two roller supports each rotatable about a corresponding axis transverse to a wire pathway, said roller supports being on opposite sides of said pathway and being driveably engaged with each other;

5 a drive roller on each of said roller supports for rotation therewith, said drive roller including an outer surface extending circumferentially about said corresponding axis that defines a groove having an included angle of less than ninety degrees (90°), said drive roller on each of said roller supports
10 compressively contacting a continuous length of wire between said roller supports such that said wire is advanced along said pathway in response to rotation of said drive rollers.

2. The wire feeding mechanism of claim 1 wherein said included angle is about thirty to about sixty degrees (30° - 60°).

3. The wire feeding mechanism of claim 2 wherein said included angle is about sixty degrees (60°).

4. The wire feeding mechanism of claim 1 wherein a centerline of said continuous length of wire is above said outer surface of said drive roller.

5. The wire feeding mechanism of claim 4 wherein said included angle is about thirty to about sixty degrees (30° - 60°).

6. A wire feeding mechanism for advancing a continuous length of wire along a pathway, comprising:

a housing having two roller supports each rotatable about a corresponding axis transverse to a wire pathway, said roller supports being on opposite sides of said pathway and being driveably engaged with each other;

a first drive roller concentrically disposed with one of said two roller supports for rotation therewith, said first drive roller including a first drive roller groove extending circumferentially therearound and having a first drive roller included angle of less than ninety degrees (90°);

a second drive roller concentrically disposed with the other of said two roller supports for rotation therewith, said second drive roller including a second drive roller groove extending circumferentially therearound and having a second drive roller included angle of less than ninety degrees (90°); and

said first and second drive rollers positioned relative to one another such that a continuous length of wire received in said circumferential grooves between said first and second drive rollers is advanced along said passageway in response to rotation of said first and second drive rollers.

7. The wire feeding mechanism of claim 6 wherein said included angles are each about thirty to about sixty degrees (30° - 60°).

8. The wire feeding mechanism of claim 6 wherein a centerline of said continuous length of wire is between a first drive roller outside surface and a second drive roller outside surface.

9. The wire feeding mechanism of claim 8 wherein said included angles are each about thirty to about sixty degrees (30° - 60°).

10. The wire feeding mechanism of claim 6 wherein at least one of said first and second drive rollers compressively engages said continuous length of wire to advance said wire along said passageway in response to rotation of said at least one of said first and second drive rollers.

11. The wire feeding mechanism of claim 6 further including:

5 a second set of roller supports each rotatable about a corresponding axis transverse to a wire pathway, said second set of roller supports spaced apart from said two roller supports along said pathway, each of said second set of roller supports being on opposite sides of said pathway and being driveably engaged with each other;

10 a third drive roller concentrically disposed with one of said second set of roller supports for rotation therewith, said third drive roller including a third drive roller groove extending circumferentially therearound and having a third drive roller included angle of less than ninety degrees (90°);

15 a fourth drive roller concentrically disposed with the other of said second set of roller supports for rotation therewith, said fourth drive roller including a fourth drive roller groove extending circumferentially therearound and having a fourth drive roller included angle of less than ninety degrees (90°), said fourth drive roller positioned opposite said third drive roller so that said wire is compressively received between said third and fourth drive rollers for advancement along said passageway in response to rotation of said third and fourth drive rollers.

12. The wire feeding mechanism of claim 6 wherein said first drive roller includes a second first drive roller groove extending circumferentially therearound and spaced from said first drive roller groove for use when said first drive roller groove is worn.

13. The wire feeding mechanism of claim 6 wherein at least one of said first and second drive rollers is radially adjustably positionable relative to said pathway.

14. A wire feeding mechanism for advancing a continuous length of wire along a pathway, comprising:

a first drive roller rotatably supported in a housing for engaging and advancing a continuous length of wire along a pathway;

5 a second drive roller rotatably supported in said housing on an opposite side of said pathway from said first drive roller for engaging and advancing said wire along said pathway; and

10 said first and second drive rollers each including an outer surface extending circumferentially thereabout, said outer surface having a first side wall and a second side wall that together define a groove, said first side wall oriented at an angle of less than ninety degrees (90°) relative to said second side wall.

15. The wire feeding mechanism of claim 14 wherein said first and second drive rollers positioned to compressively engage said wire to advance said wire along said pathway in response to rotation of said first and second drive rollers.

16. The wire feeding mechanism of claim 14 further including:

5 a housing having two roller supports each rotatable about a corresponding axis transverse to a wire pathway, said first and second drive rollers mounted on said roller supports for rotation therewith and said roller supports being driveably engaged with one another.

17. The wire feeding mechanism of claim 14 wherein the first side wall is oriented at an angle of between about thirty and about sixty degrees (30°-60°).

18. The wire feeding mechanism of claim 14 wherein a centerline of said continuous length of wire is above said outer surface of both of said drive rollers.

19. The wire feeding mechanism of claim 18 wherein said first side wall is oriented at an angle of between about thirty and about sixty degrees (30°-60°).

20. The wire feeding mechanism of claim 19 wherein said first side wall is oriented at an angle of about sixty degrees (60°).